

## PELTI Flight Report for RF10 (09), 22 July 2000

This was our ferry from St. Croix back to Miami. It was listed as a research flight, but after overexpending our flight hour budget we needed to fly most of it at a cruising altitude to minimize the flight time.

We overflew the PRIDE lidar site in Puerto Rico on our way to Miami. On the first leg we exposed Nuclepore filters in all filter holders, to compare the small-flow streaker Nuclepores with large-flow 90 mm ones. We tried to fly this leg in dust, but soon ran out of the layer.

The flight was flown as RF10, since when the data system was rebooted on RF08 it automatically assigned the remainder of RF08 the number RF09. Thus, all filters and non-RAF data files are named using RF10. RAF has elected to rename its data files RF09 to reflect a more realistic number of flights. *RF09 and RF10 thus refer to the same flight.*

1806	Takeoff from STX
1818:50	Level at 3030 m (under ATC control)
1815 – 1838	Display system froze
1823:06 – 1831:50	<b>Leg over Cabras Island Lidar</b> ; closest at 1827:20
1838 – 1915	<b>All-Nuclepore filter sample</b> – terminated after dust ran out
1926:51 – 1935 (?)	<b>Common-inlet calibrations</b> in haze layer
1935	Climb to 6060 m
1955 – 2113	<b>Teflon filter sample</b> at 6060 m. Extremely clean air!
2113	Altitude and direction changes under MIA control
2155	Landed at MIA

### Notes

- The data system froze again on this flight, but apparently came back each time.
- All the FSSP-300s were flown on the wings on the way back to MIA and Jeffco, to permit an intercomparison. These were the only flights without an internal FSSP.
- We found it hard to maintain isokinetic flow during the leg at 6060 m, in part because some exhaust plumbing collapsed. We will need to use more rigid plumbing in ACE-Asia to ensure that we can sample high-altitude layers efficiently.
- The air on this flight was extremely clean, so there may not be much material on the filters to analyze.

Barry Huebert  
1 August 2000

